

CLAIMS:

1. A method of recognizing a speech utterance (s) available in spelled form, comprising a first processing stage in which a corresponding letter sequence (r) is estimated by means of a letter speech recognition unit (2) based on hidden Markov Models, and including a second processing stage (3) in which the estimated result (r) produced by the first processing stage utilizing a statistical letter sequence model (4) and a statistical model (5) for the speech recognition unit (2) is post-processed, while the dynamic programming method is used during the post-processing, characterized in that the grid structure on which the dynamic programming is based and whose node points are provided for the assignment to accumulated probability values, is converted into a tree structure and in that the A* algorithm is used for finding an optimum tree path.

2. A method as claimed in claim 1, characterized in that sub-optimum tree paths corresponding to N best estimates are determined for the speech utterance input with $N > 1$.

3. A method as claimed in claim 1 ~~or 2~~, characterized in that during the search for an optimum tree path those tree paths that already at the beginning of the search have a small probability compared to other tree paths are preferably no longer followed.

4. A method as claimed in one of the ~~claims 1 to 3~~ ^{claim}, characterized in that the first processing stage is executed by means of a first IC and a second processing stage by means of a second IC.

5. A method of system control by means of speech signals (w, s) in which

- a whole word (w) serving as a control signal is input and at least part of this word is input in spelled form (s),
- word speech recognition (7) is used for recognizing the whole word (w) that is input, letter speech recognition (1) more particularly as claimed in one of the claims 1 to 4 is used for recognizing the spelled part (s) that is input of the whole word (w), and

- a vocabulary assigned to the word speech recognition (7) is restricted by the recognition result (s) of the letter speech recognition (1).

6. A speech-controlled electric device, more particularly, a navigation system for
5 motorcars, comprising components (1, 7, 8) for implementing a method as claimed in one of
the claims ~~1 to 5~~.

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